

REMARKS

Favorable reconsideration and allowance of the claims of the present application are respectfully requested.

In the outstanding Office Action, Claims 8 and 9 are objected to since the previous listing of claims indicated that the claims were original. The Examiner observes that the both claims should include the identifier "Withdrawn" rather than "Original". In view of the foregoing, applicants have included the identifier "Withdrawn" with each of Claims 8 and 9.

Applicants observe that the above listing of claims now includes the proper identifier for each claim in the application. As such, the objection to Claims 8 and 9 can and should be withdrawn.

No substantial claim amendments have been made. Applicants have, however, added new Claims 12 and 13. Support for newly added claims 12 and 13 is found at page 6, lines 5-7 of the Specification.

Claims 1, 3-7 and 10 stand rejected under 35 U.S.C. § 103 as allegedly unpatentable over the combined disclosures of U.S. Patent No. 6,345,577 to Cramer et al. ("Cramer et al"), U.S. Patent No. 4,770,728 to Berg et al. ("Berg et al.") and U.S. Patent No. 6,547,899 to Lee et al. ("Lee et al."). Claim 11 is rejected under 35 U.S.C. § 103 as allegedly unpatentable over the combined disclosures of Cramer et al., Berg et al., and U.S. Patent No. 6,425,966 to Highsmith et al ("Highsmith et al.").

Applicants respectfully submit that the claims of the present application are not rendered obvious by the combined disclosures of Cramer et al., Berg et al. and Lee et al. and optionally Highsmith et al. Specifically, the combined disclosures of applied references do not teach or suggest a process for producing an insensitive explosive mixture comprising *depositing*

sonochemically aminated 1,3,5-triamino-2,4,6-trinitrobenzene (TATB) in an amount of less than 15 % by weight onto secondary explosive crystals to form a coating of said TATB on said secondary explosive crystals which binds said secondary explosive crystals.

Cramer et al. is defect in that the applied reference does not teach or suggest that the disclosed energetic deterrent coating which can include TATB can be used to bind the propellant grains together. Instead, a separate binder (see col. 2, lines 27-37) is used to bind the propellant grains together. These binders are present in the initial propellant mixture hence the binding of the propellant grains is conducted prior to the application of the energetic deterrent. As such, Cramer et al. does not contemplate the addition of the binder to the coating composition.

Berg et al. does not alleviate the above defects in Cramer et al. since Berg et al. comprises conventional binders that can be used as part of the coating composition which coating composition can be applied to high energy explosive crystals.

Lee et al. does not alleviate the above defect in Cramer et al and Berg et al. since the applied tertiary reference also fails to teach or suggest applicants' claimed process for producing an insensitive explosive mixture wherein a coating of sonochemically aminated TATB is formed on secondary explosive crystals which binds the secondary explosive crystals.

Lee et al. provides a method for forming fine TATB powder using ammonium hydroxide solution and ultrasonic irradiation. The applied secondary reference, however, does not teach or suggest a step of depositing the same onto explosive crystals such that a coating is formed on the crystals which binds the crystals together.

Applicants observe that Lee et al. fails to recognize that the TATB powder mentioned therein could be applied as a coating and that the use of the disclosed method would provide

binder properties to a coating composition. There is not disclosure in Lee et al. that would lead one skilled in the art to try to use the disclosed method therein for providing a coating that binds secondary explosive crystals together as presently claimed. Applicants further observe that one skilled in the art would not consider to use the process of Lee et al. to provide a coating composition to a secondary explosive crystal which not only coats, but binds the secondary explosive crystals together since neither Lee et al., nor Cramer et al. teach or suggest that the coating composition can itself have binding properties.

Applicants thus submit that the combined disclosures of Cramer et al., Berg et al. and Lee et al. do not render the claimed invention obvious. Hence, the rejection of the claims under 35 U.S.C. § 103 has been obviated. Reconsideration and withdrawal thereof are respectfully requested.

With respect to the obviousness rejection citing the combination of Cramer et al., Berg et al., Lee et al. and Highsmith et al., applicants observe that the combination of Cramer et al., Berg et al., and Lee et al. is defective for the reason mentioned above. Highsmith et al. does not alleviate the above defect in the combination of applied references since the applied reference also does not teach or suggest applicants' claimed method which provides a coating of sonochemically aminated TATB on secondary explosive crystals which binds the secondary explosive crystals.

Highsmith et al. provides a plasticizer that is at least as energetic as nitrate ester-containing plasticizers, but exhibits far superior shock sensitivity and thermal stability than the nitrate ester-containing plasticizers. The plasticizer disclosed in Highsmith et al. is 2,2-dinitro-1,3-propanediol diformate (ADDF). Applicants find no disclosure in Highsmith et al. of the

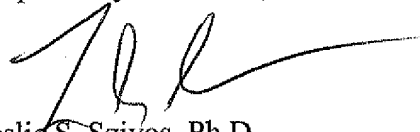
claimed method which provides a coating of TATB onto explosive crystals which serves to bind the crystals together.

Applicants thus submit that the rejection of Claim 11 (which ultimately depends on Claim 1) under 35 U.S.C. § 103 citing the combination of Cramer et al., Berg et al. Lee et al. and Highsmith et al. has been obviated. Reconsideration and withdrawal thereof are respectfully requested.

The § 103 rejections also fail because there is no motivation in the applied references which suggest modifying the methods to include the various processing steps and elements recited in the claims of the present invention. Thus, there is no motivation provided in the applied references, or otherwise of record, to make the modification mentioned above. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Vaeck, 947 F.2d, 488, 493, 20 USPQ 2d. 1438, 1442 (Fed.Cir. 1991).

Thus, in view of the foregoing amendments and remarks, it is firmly believed that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



Leslie S. Szivos, Ph.D.
Registration No. 39,394

Scully, Scott, Murphy & Presser, P.C.
400 Garden City – Suite 300
Garden City, New York 11530
(516) 742-4343
Customer No. 23389
LSS:vh/tb